Segal Consulting

Alameda County Employees' Retirement Association

Governmental Accounting Standards Board (GASB) 74 Actuarial Valuation of the Benefits Provided by the Supplemental Retiree Benefits Reserve Other Postemployment Benefits (OPEB) as of December 31, 2018

This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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May 20, 2019

Board of Retirement
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, CA 94612

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement 74 Actuarial Valuation as of December 31, 2018. It contains various information that will need to be disclosed in order to comply with GASB 74.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Association. The census and financial information on which our calculations were based was prepared by ACERA. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the health care cost, economic or demographic assumptions; changes in health care trend, and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Thomas Bergman, ASA, MAAA, Enrolled Actuary and Andy Yeung ASA, MAAA, FCA, Enrolled Actuary. The health care trend and other related medical assumptions have been reviewed by Melissa A. Krumholz, FSA, MAAA. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the Association.

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: Andy Yeung — Thomas Bergman

Andy Yeung ASA, MAAA, FCA, EA
Vice President and Actuary

Thomas Bergman, ASA, MAAA, EA
Retiree Health Actuary

TJH/gxk

SECTION 1

VALUATION SUMMARY

SECTION 2

GASB 74 INFORMATION

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required for "Other Postemployment Benefits (OPEB)" plans by Statement No. 74 of the Governmental Accounting Standards Board as of December 31, 2018. This valuation is based on:

- The benefit provisions of the OPEB Plan, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of November 30, 2017, provided by ACERA;
- The assets of the Plan as of December 31, 2018, provided by ACERA;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, and health care trends, etc.

General Observations on GASB 74 Actuarial Valuation

The following points should be considered when reviewing this GASB 74 report:

- The Governmental Accounting Standards Board (GASB) rules only define OPEB liability and expense for financial reporting purposes, and do not apply to contribution amounts for OPEB funding purposes. Employers and plans still develop and adopt funding policies, if applicable, under current practices.
- When measuring OPEB liability, GASB uses the same actuarial cost method (Entry Age) and, for benefits that are being fully funded on an actuarial basis, the same expected return on Plan assets as used for funding.[1] This means that the Total OPEB Liability (TOL) measure for financial reporting shown in this report is determined on the same basis as the Actuarial Accrued Liability (AAL) measure for funding.
- The Net OPEB Liability (NOL) is equal to the difference between the TOL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets. The NOL reflects all investment gains and losses as of the measurement date.

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[1] *See discussions on next page regarding source of funding for payment of OPEB SRBR benefits not covered by current OPEB Plan's Fiduciary Net Position in the SRBR.*

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- As we disclosed in our December 31, 2018 pension funding valuation report, the 7.25% investment return assumption that the Board approved on December 21, 2017 for determining the liabilities for funding purposes and used for establishing the employer and employee contribution rates has continued to be developed without considering the impact of any future 50/50 excess earnings allocation. This is based on our understanding that Article 5.5 of the Statute, which authorizes the allocation of 50% of excess earnings to the SRBR, does not allow for the use of a different investment return for funding than is used for interest crediting. This would appear in effect to preclude the prefunding of the SRBR through the use of an assumption lower than the market earnings assumption of 7.25%.

  As required by the Actuarial Standard of Practice (ASOP) No. 4 ("Measuring Pension Obligations and Determining Pension Plan Costs or Contributions"), we performed a stochastic model to estimate the impact of the 50% allocation of future excess earnings to the SRBR. The results of our model indicated that the 50/50 allocation of future excess earnings would have about the same impact as an "outflow" (i.e., assets not available to fund the benefits included in the determination of the Total Pension Liability) that would average approximately 0.60% of assets over time. This approximated outflow was incorporated into our GASB crossover test for the pension benefits (reference: Exhibit 5 of our GASB 67 report as of December 31, 2018), along with the additional future employer contributions that would result from those future allocations of excess earnings to the SRBR under ACERA's funding policy.

  Furthermore, note (6) provided in Exhibit 5 of the GASB 67 report indicates that the present value of outflows from the 0.60% of assets over time is expected to be higher than the present values of the remaining OPEB and non-OPEB SRBR benefits that could be paid after the exhaustion of assets currently available in the SRBR.

  Therefore, in developing the crossover test for the OPEB SRBR in Exhibit 5 of this report, we have only included the projected benefits so that on a present value basis they are equal to the OPEB assets currently available in the SRBR as the remaining OPEB SRBR benefits would be paid from future excess earnings.

- The TOL as of December 31, 2018 was determined by rolling forward the liability results used in determining the sufficiency of the SRBR to provide medical and dental subsidy benefits as of December 31, 2017. That TOL has been adjusted to reflect the health care trend assumptions recommended for the upcoming sufficiency study for the SRBR as of December 31, 2018 (reference: our letter dated May 16, 2019)
- We have also continued the practice of adjusting the Plan's Fiduciary Net Position as of December 31, 2018 to include the $883.0 million set aside by the Retirement Board in the SRBR reserve to pay OPEB benefits as of December 31, 2018. It should be noted that as of December 31, 2018, the deferred investment loss for the entire Plan was $569.1 million and the Contingency Reserve was $0. Consequently, we have subtracted from the Plan's Fiduciary Net Position the proportionate share of the deferred investment loss that is commensurate with the size of the OPEB SRBR reserve, or $61.6 million (which will cause the future interest crediting rate to the SRBR reserve to drop below 7.25% per year).
- The NOL increased from $27.5 million as of December 31, 2017 to $232.9 million as of December 31, 2018 primarily as a result of unfavorable investment results during calendar year 2018 of about $209 million (for an actual market return of *negative* 14.1%[2] versus 7.25% assumed in the valuation), offset somewhat by updating health trend assumptions[3] (which on a net basis decreased the NOL by about $11.4 million). Changes in these values during the last two fiscal years ending December 31, 2018 and 2017 can be found in Exhibit 3.

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[2] *Note that the negative 14.1% market value investment return mentioned above for the SRBR is lower than the negative 4.62% investment return included in the December 31, 2018 Pension Funding Valuation for the Association's entire portfolio. The lower return for the SRBR is primarily a result of the reversal of the 50% of future excess earnings that might be allocated to the SRBR for the deferred investment gains as of December 31, 2017 to reflect future returns below 7.25% that might be allocated to the SRBR for the deferred investment losses as of December 31, 2018.*

[3] *In particular, there is a reduction in the long term annual trend assumption from 4.5% to 4.0% for dental/vision and Medicare Part B which decreases the NOL by $23.7 million.*

Summary of Key Valuation Results

	2018	2017
Disclosure elements for fiscal year ending December 31:		
Service cost[1]	$31,577,168	$26,991,283
Total OPEB Liability	1,054,337,014	1,029,354,518
Plan's Fiduciary Net Position[2]	821,440,435	1,001,876,232
Net OPEB Liability	232,896,579	27,478,286
Schedule of contributions for fiscal year ending December 31:		
Actuarially determined contributions	N/A	N/A
Actual contributions[3]	N/A	N/A
Contribution deficiency / (excess)	0	0
Demographic data for plan year ending December 31[4]:		
Number of retired members and beneficiaries receiving medical benefits	6,385	6,225
Number of retired members and beneficiaries receiving dental and vision benefits	7,519	7,270
Number of vested terminated members	410	381
Number of active members	11,349	11,323
Key assumptions as of December 31:		
Discount rate	7.25%	7.25%
Health care premium trend rates[5]		
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years	Graded from 7.00% to ultimate 4.50% over 10 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision and Medicare Part B	4.00%	4.50%

(1) *The service cost is based on the previous year's valuation, meaning the 2018 and 2017 values are based on the valuations as of December 31, 2017 and December 31, 2016, respectively. The 2018 service cost has been calculated using the assumptions shown in the 2017 column, and the 2017 service cost has been calculated using the following assumptions:*

Key assumptions as of December 31, 2016:	
Discount rate	*7.60%*
Health care premium trend rates	
Non-Medicare medical plan	*Graded from 6.50% to ultimate 4.50% over 8 years*
Medicare medical plan	*Graded from 6.50% to ultimate 4.50% over 8 years*
Dental/Vision and Medicare Part B	*4.50%*

(2) *For 2018, the Plan's Fiduciary Net Position shown ($821,440,435) includes the SRBR and 401(h) account ($889,953,169), less the SRBR implicit subsidy transfer ($6,939,808), less a proportionate share of the deferred market losses (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of the OPEB reserves ($61,572,926). For 2017, the Plan's Fiduciary Net Position amount shown ($1,001,876,232) includes the SRBR and 401(h) account ($863,836,077), less the SRBR implicit subsidy transfer ($5,830,283), plus a proportionate*

share of one half of the deferred market gains (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of the OPEB and non-OPEB reserves ($143,870,438). Note that amounts may not total properly due to rounding.

(3) *Employer contributions are on a net basis. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan*

(4) *The December 31, 2017 data is used in the measurement of the TOL as of December 31, 2018. The following data as of December 31, 2016 was used in the measurement of the TOL as of December 31, 2017:*

Number of retired members and beneficiaries receiving medical benefits	*6,018*
Number of retired members and beneficiaries receiving dental and vision benefits	*7,049*
Number of vested terminated members	*371*
Number of active members	*11,111*

The demographic data as of December 31, 2018 will be used in the sufficiency study for the SRBR as of December 31, 2018 as well as in the next year's GAS 74 valuation when we roll forward the liability from December 31, 2018 to December 31, 2019.

(5) *The trend rates shown above for 2019 are before reflecting a one-time adjustment to reflect the estimated impact of the Health Insurance Tax (HIT). The weighted average increase amongst all carriers is approximately 1.2% for Non-Medicare and 0.9% for Medicare Plans.*

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a postretirement health plan. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by ACERA. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by ACERA. The Association uses an actuarial value of assets that differs from market value of assets to gradually reflect six-month changes in the market value of assets in the SRBR sufficiency valuation.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, termination, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to health care trends. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the Board to assist sponsors of the Fund in preparing items related to the OPEB SRBR plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If ACERA is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. ACERA should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of ACERA, it is not a fiduciary in its capacity as actuaries and consultants with respect to ACERA.

EXHIBIT 1

General Information – "Financial Statements", Note Disclosures and Required Supplementary Information for a Cost-Sharing OPEB Plan

Plan Description

Plan administration. The Alameda County Employees' Retirement Association (ACERA) was established by the Alameda County Board of Supervisors in 1947. ACERA is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq.). ACERA is a cost-sharing, multiple employer, defined benefit, public employee retirement system whose main function is to provide service retirement, disability, death, and survivor benefits to the General and Safety members employed by the County of Alameda. ACERA also provides retirement benefits to the employee members of First 5 Alameda County, Housing Authority of the County of Alameda, Alameda Health System, Livermore Area Recreation and Park District (LARPD), Superior Court of California—County of Alameda, and Alameda County Office of Education.

The management of ACERA is vested with the ACERA Board of Retirement. The Board consists of nine members and two alternates. The County Treasurer is a member of the Board of Retirement by law and is elected by the general public. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two active members are elected by the General members; one active member and one alternate are elected by the Safety members; one retired member and one alternate are elected by the retired members. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with his term as County Treasurer.

Plan membership. At December 31, 2018, OPEB plan membership consisted of the following:

Retired members or beneficiaries currently receiving medical benefits	6,385
Retired members or beneficiaries currently receiving dental and vision benefits	7,519
Vested terminated members entitled to, but not yet receiving benefits	410
Active members	11,349

Note: Data as of December 31, 2018 is not used in the measurement of the TOL as of December 31, 2018. It will be used for the sufficiency study for the SRBR as of December 31, 2018 as well as in next year's GAS 74 valuation.

Benefits provided. ACERA provides benefits to eligible employees.

Membership Eligibility:

Service Retirees: Retired with at least 10 years of service (including deferred vested members who terminate employment and receive a retirement benefit from ACERA)

Disabled Retirees: A minimum of 10[4] years of service is required for non-duty disability.

There is no minimum service requirement for duty disability.

Benefit Eligibility:

1. Monthly Medical Allowance

Service Retirees: For retirees not purchasing individual insurance through the Individual Medicare Insurance Exchange, a Maximum Monthly Medical Allowance of $540.44 per month was provided, effective January 1, 2018 and through December 31, 2018. For the period January 1, 2019 through December 31, 2019, the maximum allowance is $558.00 per month.

For those purchasing insurance through the Individual Medicare Exchange, the Monthly Medical Allowance was $414.00 per month for 2018 and is $427.46 for 2019.

These Allowances are subject to the following subsidy schedule:

Completed Years of Service	Percentage Subsidized
10-14	50%
15-19	75%
20+	100%

[4] *The 10 years of service requirement is only used for determining eligibility for health benefits. For pension benefits, the eligibility requirement is 5 years of service.*

Disabled Retirees:	Non-duty disabled retirees receive the same Monthly Medical Allowance as service retirees. Duty disabled retirees receive the same Monthly Medical Allowance as those service retirees with 20 or more years of service.

2. Medicare Benefit Reimbursement Plan:

The SRBR reimburses the full Medicare Part B premium to qualified retired members.

To qualify for reimbursement, a retiree must:

- Have at least 10 years of ACERA service,
- Be eligible for Monthly Medical Allowance,
- Provide proof of enrollment in Medicare Part B.

3. Dental and Vision Plans:

The SRBR provides dental and vision benefits for retirees only. The maximum combined monthly dental and vision premium was $47.91 in 2018 and is $48.39 in 2019. The eligibility for these premiums is as follows:

Service Retirees:	Retired with at least 10 years of service.
Disabled Retirees:	For non-duty disabled retirees, 10 years of service is required. For grandfathered non-duty disabled retirees (with effective retirement dates on or before January 31, 2014), there is no minimum service requirement. For duty disabled retirees, there is no minimum service requirement.

Note about Monthly Medical Allowance:

The maximum levels of subsidy are reviewed by the Board annually and are not indexed to increase automatically.

In addition, the Monthly Medical Allowance can only be used to pay for retiree medical benefits. There is no benefit payable to beneficiaries, current spouses, former spouses or dependents.

If the actual cost of coverage is less than the Monthly Medical Allowance, the difference is not paid in cash or applied towards the coverage for beneficiaries, current spouses, former spouses or dependents.

Deferred Benefit:	Members who terminate employment with 10 or more years of service before reaching Pension eligibility commencement age may elect deferred MMA and/or dental/vision benefits.
Death Benefit:	Surviving spouses/domestic partners of members who die before the member commences retiree health benefits may enroll in an ACERA group medical plan on the date that the member would have been eligible to commence benefits. The surviving spouse/domestic partner must pay 100% of the premium. Because premiums for surviving spouses/domestic partners under age 65 are calculated together with active participants for purposes of underwriting, the surviving spouses/domestic partners receive an implicit subsidy, which creates a liability for the SRBR.

EXHIBIT 2
Net OPEB Liability

The components of the Net OPEB Liability of ACERA are as follows:

	December 31, 2018	December 31, 2017
Total OPEB Liability	$1,054,337,014	$1,029,354,518
Plan's Fiduciary Net Position	821,440,435	1,001,876,232
Association's Net OPEB Liability	$232,896,579	$27,478,286
Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability	77.91%	97.33%

The Net OPEB Liability was measured as of December 31, 2018 and 2017. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date, while the Total OPEB Liability was determined by rolling forward the Total OPEB Liability as of December 31, 2017 and 2016, respectively.

Plan provisions. The plan provisions used in the measurement of the NOL as of December 31, 2018 and 2017 is the same as those used in ACERA's SRBR sufficiency valuation as of December 31, 2017 and 2016, respectively.

Actuarial assumptions. The actuarial assumptions used for the December 31, 2018 valuation were based on the results of the experience study for the period from December 1, 2013 through November 30, 2016 that were approved by the Board effective with the December 31, 2017 valuation and the health care trend assumptions recommended for the upcoming sufficiency study for the SRBR as of December 31, 2018 (reference: our letter dated May 16, 2019). The assumptions used in the December 31, 2018 SRBR OPEB actuarial valuation for ACERA were applied to all periods included in the measurement:

December 31, 2018

Investment rate of return	7.25%, net of OPEB plan investment expense, including inflation
Inflation	3.00%
Health care premium trend rates*	
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision and Medicare Part B	4.00%
Other assumptions	Same as those proposed in the experience study for the period December 1, 2013 through November 30, 2016

December 31, 2017

Investment rate of return	7.25%, net of OPEB plan investment expense, including inflation
Inflation	3.00%
Health care premium trend rates	
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision and Medicare Part B	4.50%
Other assumptions	Same as those proposed in the experience study for the period December 1, 2013 through November 30, 2016

* The trend rates shown above for 2019 are before reflecting a one-time adjustment to reflect the impact of the Health Insurance Tax (HIT). The weighted average increase amongst all carriers is approximately 1.2% for Non-Medicare and 0.9% for Medicare plans.

The long-term expected rate of return on OPEB plan investments[5] was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin.

[5] *Note that the investment return assumption for SRBR sufficiency testing (and pension plan funding) purposes was developed net of both investment and administrative expenses; however, the same investment return assumption was used for financial reporting purposes, and it was considered gross of administrative expenses for financial reporting purposes. (This resulted in an increase in the margin for adverse deviation when using that investment return assumption for financial reporting.)*

The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption for the December 31, 2018 valuation are summarized in the following table:

Asset Class	Target Allocation	Long-Term (Arithmetic) Expected Real Rate of Return
Domestic Large Cap Equity	22.40%	5.75%
Domestic Small Cap Equity	5.60%	6.37%
Developed International Equity	19.50%	6.89%
Emerging Markets Equity	6.50%	9.54%
U.S. Core Fixed Income	11.25%	1.03%
High Yield Bonds	1.50%	3.99%
International Bonds	2.25%	0.19%
TIPS	2.00%	0.98%
Real Estate	8.00%	4.47%
Commodities	3.00%	3.78%
Hedge Funds	9.00%	4.30%
Private Equity	9.00%	7.60%
Total	100.00%	

Discount rate: The discount rate used to measure the Total OPEB Liability was 7.25% as of December 31, 2018 and December 31, 2017. The projection of cash flows used to determine the discount rate assumed benefits are paid out of current OPEB SRBR assets. Based on those assumptions, the SRBR OPEB plan's Fiduciary Net Position was projected to be available to make all projected future benefits payments for current plan members.[6] Therefore the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of December 31, 2018 and December 31, 2017.

[6] *See discussions in Section 1 regarding source of funding for payment of OPEB SRBR benefits not covered by current OPEB SRBR Plan's Fiduciary Net Position.*

Sensitivity of the Net OPEB Liability to changes in the discount rate. The following presents the Net OPEB Liability of ACERA as of December 31, 2018, calculated using the discount rate of 7.25%, as well as what ACERA's Net OPEB Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount (7.25%)	1% Increase (8.25%)
Net OPEB Liability as of December 31, 2018	$363,577,142	$232,896,579	$123,707,490

Sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rate. The following presents the Net OPEB Liability of ACERA as of December 31, 2018, calculated using the current trend rate as well as what ACERA's Net OPEB Liability would be if it were calculated using a trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease*	Current Trend Rates*	1% Increase*
Net OPEB Liability as of December 31, 2018	$110,529,782	$232,896,579	$382,925,458

* *Current trend rates: 7.00% graded down to 4.5% over 10 years for Non-Medicare medical plan costs; 6.50% graded down to 4.5% over 8 years for Medicare medical plan costs and 4.0% for all years for Dental, Vision and Medicare Part B costs. The medical trend rates shown above for 2019 (7.00% and 6.50% for non-Medicare and Medicare plans, respectively) are before reflecting a one-time adjustment to reflect the estimated impact of the Health Insurance Tax (HIT). The weighted average increase amongst all carriers is approximately 1.2% for Non-Medicare and 0.9% for Medicare plans.*

EXHIBIT 3
Schedules of Changes in Net OPEB Liability – Last Two Fiscal Years

	2018	2017
Total OPEB Liability		
Service cost[(1)]	$31,577,168	$26,991,283
Interest	73,426,531	69,878,539
Change of benefit terms	0	0
Differences between expected and actual experience	-27,712,610	-21,627,766
Changes of assumptions	-11,429,923	58,973,316
Benefit payments	-40,878,670	-37,903,590
Net change in Total OPEB Liability	$24,982,496	$96,311,782
Total OPEB Liability – beginning	1,029,354,518	933,042,736
Total OPEB Liability – ending (a)	$1,054,337,014	$1,029,354,518
Plan's Fiduciary Net Position		
Contributions – employer[(2)]	N/A	N/A
Contributions – employee	N/A	N/A
Net investment income	-$138,332,627	$243,187,807
Benefit payments	-40,878,670	-37,903,590
Administrative expense	-1,224,500	-1,203,500
Other	0	0
Net change in Plan's Fiduciary Net Position	-$180,435,797	$204,080,717
Plan's Fiduciary Net Position – beginning[(3)]	1,001,876,232	797,795,515
Plan's Fiduciary Net Position – ending (b)[(3)]	$821,440,435	$1,001,876,232
Net OPEB Liability – ending (a) – (b)	$232,896,579	$27,478,286
Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability	77.91%	97.33%
Covered-employee payroll[(4)]	N/A	N/A
Plan Net OPEB Liability as percentage of covered-employee payroll	N/A	N/A

(1) *The service cost is always based on the previous year's valuation, meaning the valuation as of December 31, 2017 and 2016, respectively.*

(2) *Employer contributions are on a net basis. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.*

(3) *See footnote (2) on page iv for a discussion on the development of the 2018 "Plan's Fiduciary Net Position – beginning" amount of $1,001,876,232 and the 2018 "Plan's Fiduciary Net Position – ending" amount of $821,440,435.*

(4) *Covered-employee payroll is not shown as contributions to the OPEB plan are not based on a measure of pay. Covered-employee payroll represents Compensation Earnable and Pensionable Compensation. Only Compensation Earnable and Pensionable Compensation that would go into the determination of retirement benefits would otherwise be included.*

EXHIBIT 4

Schedule of Employer Contributions – Last Ten Fiscal Years

Year Ended December 31	Actuarially Determined Contributions[1]	Contributions in Relation to the Actuarially Determined Contributions[1]	Contribution Deficiency / (Excess)	Covered-Employee Payroll[2]	Contributions as a Percentage of Covered-Employee Payroll
2009	N/A	N/A	0	N/A	N/A
2010	N/A	N/A	0	N/A	N/A
2011	N/A	N/A	0	N/A	N/A
2012	N/A	N/A	0	N/A	N/A
2013	N/A	N/A	0	N/A	N/A
2014	N/A	N/A	0	N/A	N/A
2015	N/A	N/A	0	N/A	N/A
2016	N/A	N/A	0	N/A	N/A
2017	N/A	N/A	0	N/A	N/A
2018	N/A	N/A	0	N/A	N/A

(1) *Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.*

(2) *Covered-employee payroll is not shown as contributions to the OPEB plan are not based on a measure of pay. Covered-employee payroll represents Compensation Earnable and Pensionable Compensation. Only Compensation Earnable and Pensionable Compensation that would go into the determination of retirement benefits would otherwise be included.*

EXHIBIT 5

Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of December 31, 2018

($ in millions)

Year Beginning January 1,	Projected Beginning OPEB Plan's Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending OPEB Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2018	$1,002	$0	$41	$1	-$138	$821
2019	821	0	53	1	58	825
2020	825	0	57	1	58	825
2021	825	0	61	1	58	821
2022	821	0	65	1	57	812
2023	812	0	69	1	56	799
2024	799	0	74	1	55	779
2025	779	0	78	1	54	754
2026	754	0	82	1	52	723
2027	723	0	86	1	49	686
2028	686	0	89	1	46	642
2029	642	0	93	1	43	591
2030	591	0	97	1	39	533
2031	533	0	101	1	35	466
2032	466	0	104	1	30	391
2033	391	0	108	0 *	24	307
2034	307	0	111	0 *	18	213
2035	213	0	114	0 *	11	110
2036	110	0	114	0 *	4	0
2037	0	0	0	0	0	0
2038	0	0	0	0	0	0
2039	0	0	0	0	0	0
2040	0	0	0	0	0	0
2132	0	0	0	0	0	0
2133	0	0	0	0	0	0
2133	Discounted Value: 0					

* *Less than $1 M, when rounded.*

EXHIBIT 5

Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of December 31, 2018 ($ in millions) - continued

Notes:

(1) Amounts may not total exactly due to rounding.

(2) Amounts shown in the year beginning January 1, 2018 row are actual amounts, based on the financial statements provided by ACERA.

(3) Years 2041 - 2131 have been omitted from this table.

(4) Column (a): Except for the "discounted value" shown for 2133, all of the projected beginning Plan's Fiduciary Net Position amounts shown have not been adjusted for the time value of money.

(5) Column (b): $0. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.

(6) Column (c): Projected benefit payments have been determined in accordance with paragraph 43-47 of GASB Statement No. 74, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of November 30, 2017. The projected benefit payments reflect future health care trends. The projected benefit payments include the OPEB SRBR benefits to the extent the current OPEB SRBR (including the portion of deferred investment loss as of December 31, 2018 that is expected to be allocated to the SRBR) supports those benefits*. Benefit payments are assumed to occur halfway through the year, on average. In accordance with paragraph 35 b.(2)(e) of GASB Statement No. 74, the long-term expected rate of return on Plan investments of 7.25% per annum was applied to all periods of projected benefit payments to determine the discount rate.

(7) Column (d): Projected administrative expenses are calculated as approximately 0.12% of the beginning OPEB SRBR Plan's Fiduciary Net Position amount. The 0.12% portion was based on the actual fiscal year 2018 administrative expenses as a percentage of the beginning OPEB SRBR Plan's Fiduciary Net Position amount as of January 1, 2018. Administrative expenses are assumed to occur halfway through the year, on average.

(8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.25% per annum.

(9) As illustrated in this Exhibit, the OPEB SRBR Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.25% per annum was applied to all periods of projected benefit payments to determine the total OPEB liability as of December 31, 2018 shown earlier in this report, pursuant to paragraph 48 of GASB Statement No. 74.

* See discussion on page ii regarding source of funding for payment of OPEB SRBR benefits not covered by current OPEB Plan's Fiduciary Net Position in the SRBR.

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